Implementing The Diesel Risk Reduction Plan: <u>Stationary Diesel Irrigation Pump Emissions Inventory</u>

California Environmental Protection Agency

Air Resources Board

Background

- The current emissions inventory contains only **mobile** irrigation pumps
- The statewide 1990 population of mobile+ stationary = 7253 pumps

Mobile-to-Stationary Split

Hp	% Mobile	% Stationary
<25	100	0
50	90	10
120	70	30
175	20	80
250	15	85
500	10	90
>500	0	100

Stationary and Mobile Comparison

- The results based on the split between mobile and stationary equipment are:
  - 47% stationary irrigation pumps
  - 53% mobile irrigation pumps

Input Factors

- The input factors used are based on mobile irrigation pumps

Useful Life	Activity (hr/yr)	Load Factor
16	749	0.65

Proposed 2000 Emissions Inventory (TPD Statewide)

- Stationary diesel irrigation pumps

Equipment	Hp	Population	Activity	TOG	CO	NOx	PM
Irrigation Pumps	50	63	129	0.01	0.03	0.02	0.00
	120	1226	2516	0.25	0.77	1.80	0.15
	175	1599	3281	0.36	1.34	3.44	0.19
	250	520	1067	0.13	0.48	1.42	0.07
	500	64	132	0.02	0.17	0.28	0.01
Grand Total		3473	7126	0.78	2.79	6.96	0.42

Proposed 2000 Emissions Inventory for SC, SV, and SJV Air Basins (2000)

- Stationary diesel irrigation pump emissions inventory (tpd) by air basin:

Air Basin	Total Pop	Stat. Pop	Activity	TOG	CO	NOX	PM
SC	473	222	455	0.05	0.18	0.44	0.03
SV	1321	620	1272	0.14	0.50	1.24	0.07
SJV	3287	1542	3166	0.35	1.24	3.09	0.19

Conclusions

- The proposed stationary diesel irrigation pump emissions inventory is derived based on input factors for mobile irrigation pumps and the mobile-to-stationary split for commercial equipment.

Future Projects

- Similar steps will be taken to determine the emissions inventory for stationary equipment in the commercial category.
  - **Compressors**
  - **Generators**
  - **Pumps**
  - **Pressure washers**
  - **Welders**